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The Mineral Industry of the Netherlands

UNITED STATES DEPARTMENT OF THE INTERIOR

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The Mineral Industry of the Netherlands

By Don Buck[1]

The rate of growth in the gross national product of the Netherlands slowed to 1.5% in 1987, largely as a result of the global realignment of monetary values. Devaluation of the U.S. dollar and deterioration of the price of exported gas were factors in a reduction of approximately 50% in the Netherlands foreign trade surplus, which dropped to $3.4 billion.[2] Revenues from gas exports, traditionally a significant source of Government income, dropped to $2.5 billion, a 67% decline since the record high of $7.4 billion in 1985.[3] Investment in petroleum exploration and production reflected a similar drop in 1987 as companies adjusted to changed monetary values and to decreased product prices. Other mineral-related industries in the Netherlands, such as the processing of metals and chemicals, showed no change in trade surpluses. Export prices were reduced, partly because raw material costs were down, but also so that companies in the Netherlands could remain competitive in the international market.

The unemployment rate in the Netherlands was 12.5%, one of the highest rates in the European Economic Community, despite Government attempts to foster economic growth and reduce the burden of social programs on the national economy. Government spending increased 8% to $13.3 billion, and Government outlays constituted 60% of the gross domestic product or 7.6% of the national income.[4]

PRODUCTION

Manufacturing production grew at the slow rate of 1% and recorded one of the worst performances in recent years.[5] International competition and appreciation in value of the guilder were major factors in the reduction of export revenues, especially to the United States and other nations linked to the declining dollar. The declining rate of business investment was partly offset by strong increases in the chemical industry (up 9%) and basic metal industry (up 7%), reflecting lower import costs in raw materials and the stronger value of the guilder. Investment by businesses slowed as a wait-and-see attitude developed toward the world trade and exchange rates. This condition was expected to carry over into 1988.

Table 1.—Netherlands: Production of mineral commodities[1]

(Metric tons unless otherwise specified)

Commodity[2]	1983	1984	1985	1986	1987[p]
METALS					
Aluminum:					
Primary	235,351	249,170	250,603	265,768	275,939
Secondary	58,199	59,894	62,315	96,794	101,403
Cadmium metal	513	636	598	585	517
Iron and steel:					
Ore sintered (from imported ore) thousand tons	2,669	3,516	3,737	3,706	3,682
Metal:					
Pig iron do.	3,747	4,926	4,819	4,628	4,575
Steel, crude do.	4,477	5,739	5,517	5,283	5,082
Semimanufactures do.	4,066	4,928	4,868	4,799	4,709
Lead: Refined:					
Primary	2,000				
Secondary[e]	[r]23,600	[r]25,000	[r]25,000	33,000	[e]40,000
Total	25,600	[r]25,000	[r]25,000	33,000	[e]40,000
Tin, refined:					
Primary	5,398	6,517	6,033	5,104	3,834
Secondary[e]	180	180	204	200	180
Zinc (slab), primary	187,519	209,657	201,712	196,156	207,111
INDUSTRIAL MINERALS					
Cement, hydraulic thousand tons	3,107	3,176	2,911	3,100	2,929
Nitrogen: N content of ammonia do.	1,747	2,312	2,386	2,185	2,287
Salt, all types do.	3,124	3,674	4,154	3,763	3,979
Sand, industrial do.	19,399	[e]19,000	19,988	22,841	22,274
Sodium compounds, n.e.s.:[e]					
Carbonate do.	420	400	380	380	380
Sulfate, synthetic do.	50	45	45	45	45
Sulfur:					
Elemental byproduct:[e]					
Of metallurgy do.	100				
Of petroleum and other forms do.	105	245	250	250	245
Total do.	205	245	250	250	245
Sulfuric acid, 100% H_2SO_4 do.	1,420	1,609	1,548	1,209	956
MINERAL FUELS AND RELATED MATERIALS					
Carbon black	91,200	102,300	103,000	104,700	105,500
Coke thousand tons	2,126	2,726	2,971	2,867	2,736
Gas:					
Manufactured, all types[4] million cubic feet	288,445	298,631	266,056	271,918	325,489
Natural, gross do.	2,702,792	2,728,041	2,850,581	2,614,543	2,621,959
Natural gas liquids thousand 42-gallon barrels	3,608	3,818	4,221	4,221	4,278
Peat[e] thousand tons	400	450	450	400	400
Petroleum:					
Crude thousand 42-gallon barrels	17,647	21,143	27,734	34,046	29,243
Refinery products:					
Gasoline, motor do.	60,597	56,568	53,049	60,189	62,254
Jet fuel do.	28,288	28,968	27,800	30,808	31,120
Kerosene do.	4,487	4,487	3,550	4,658	3,891
Distillate fuel oil do.	107,461	120,039	111,303	147,305	133,549
Residual fuel oil do.	103,743	102,744	85,901	85,901	92,154
Lubricants do.	3,423	[e]3,500	5,544	5,117	[e]5,000
Liquefied petroleum gas do.	21,912	[e]22,000	22,562	25,230	27,457
Naphtha do.	67,737	63,784	50,133	65,986	75,944
Bitumen do.	4,375	[e]4,500	4,242	5,048	4,545
Total[5] do.	402,023	406,590	364,084	430,242	[3]435,914

[e]Estimated. [p]Preliminary. [r]Revised.

[1]Table includes data available through Sept. 1988.

[2]In addition to the commodities listed, a variety of crude construction materials (clays, gravel, and stone) are also produced, but output is not reported, and available information is inadequate to make reliable estimates of output levels.

[3]Reported figure.

[4]Coke oven and blast furnace gas only.

[5]Total of listed products only; refinery fuel and losses included with listed products.

TRADE

The Netherlands, situated at the intersection of the Rhine, Europe's major river, and the sealanes of the North Atlantic, has prospered on trading and distribution of products. With limited local mineral resources on which to build an industrial economy, the Port of Rotterdam has become the world's busiest seaport, importing raw material for refinement and distribution of goods. Rotterdam's strategic location was reflected in the estimates that Netherlands barges carry almost one-half of all inland water freight on the European Continent, and that Netherlands truckers carry one-fourth of the international freight carried on European roads. The Port of Rotterdam handled 100 million tons more cargo than the second busiest seaport in the world and more than the next three European ports combined.

The Netherlands trade volume increased by 4% in 1987, with exports valued at $92.3 billion and imports at $89.7 billion. The United States generated its greatest trade surplus, about $4 billion, in trading with the Netherlands. The proportion of U.S. exports going to the Netherlands rose from 8% to 8.4%, while the Netherlands proportion of U.S. imports dropped slightly to 4%.

Table 2.—Netherlands: Exports of mineral commodities[1]

(Metric tons unless otherwise specified)

Commodity	1985	1986	Destinations, 1986	
			United States	Other (principal)
METALS				
Alkali and alkaline-earth metals:				
Alkali metals	2	1	--	Mainly to United Kingdom.
Alkaline-earth metals	--	10	--	All to West Germany.
Aluminum:				
Ore and concentrate	5,063	3,983	--	Belgium-Luxembourg 2,560; Norway 224; Sweden 216.
Oxides and hydroxides	59,175	46,493	--	West Germany 13,104; United Kingdom 11,272; France 4,929.
Ash and residue containing aluminum	11,371	10,863	--	West Germany 7,132; Spain 2,655; France 441.
Metal including alloys:				
Scrap	87,062	96,045	--	West Germany 50,695; Belgium-Luxembourg 18,104; France 17,717.
Unwrought	296,767	301,260	2,332	Belgium-Luxembourg 118,999; France 83,951; West Germany 54,561.
Semimanufactures	109,418	121,245	7,160	West Germany 48,560; Belgium-Luxembourg 18,232; France 15,105.
Antimony:				
Ore and concentrate	1	--	--	--
Oxides	243	220	NA	West Germany 94; Italy 68; France 37.
Metal including alloys, all forms	59	7	--	NA.
Arsenic: Oxides and acids	10	--	--	--
Beryllium:				
Oxides and hydroxides	--	(2)	NA	NA.
Metal including alloys, all forms	(2)	1	--	Mainly to Belgium-Luxembourg.
Bismuth: Metal including alloys, all forms	12	27	--	France 12; West Germany 12.
Cadmium: Metal including alloys, all forms	615	541	32	France 290; United Kingdom 87; West Germany 75.
Cesium and rubidium: Metal including alloys, all forms	(2)	(2)	--	Mainly to France.
Chromium:				
Ore and concentrate	27,379	30,070	--	West Germany 10,776; France 7,589; Belgium-Luxembourg 3,623.
Oxides and hydroxides	421	408	(2)	West Germany 171; Italy 119; France 43.
Metal including alloys, all forms	2	75	--	NA.

See footnotes at end of table.

Table 2.—Netherlands: Exports of mineral commodities[1] —Continued

(Metric tons unless otherwise specified)

Commodity	1985	1986	Destinations, 1986	
			United States	Other (principal)
METALS —Continued				
Cobalt:				
Ore and concentrate	25	(2)	NA	NA.
Oxides and hydroxides	48	78	20	West Germany 30; Turkey 6.
Metal including alloys, all forms	286	35	--	United Kingdom 19; Belgium-Luxembourg 7; West Germany 2.
Columbium and tantalum:				
Ore and concentrate	154	4	--	All to West Germany.
Ash and residue containing columbium and/or tantalum	1	249	--	Do.
Metal including alloys, all forms:				
Columbium (niobium)	(2)	1	(2)	Mainly to United Kingdom.
Tantalum	2	28	--	Spain 27.
Copper:				
Matte and speiss including cement copper	20	310	--	Spain 303; Belgium-Luxembourg 7.
Oxides and hydroxides	115	112	--	West Germany 22; Norway 20; United Arab Emirates 20.
Sulfate	2,048	1,834	--	Belgium-Luxembourg 854; West Germany 422; United Kingdom 355.
Ash and residue containing copper	8,946	6,387	41	Belgium-Luxembourg 3,057; West Germany 2,622; India 260.
Metal including alloys:				
Scrap	73,072	63,208	--	West Germany 30,357; Belgium-Luxembourg 19,209; Italy 7,058.
Unwrought	9,462	6,066	73	West Germany 4,589; France 857; Sweden 215.
Semimanufactures	59,723	59,615	16,622	West Germany 11,694; Belgium-Luxembourg 5,710.
Germanium: Metal including alloys, all forms	1	(2)	--	All to West Germany.
Gold:				
Waste and sweepings value, thousands	$17,161	$18,391	$420	West Germany $14,753; Spain $1,232; Switzerland $941.
Metal including alloys, unwrought and partly wrought troy ounces	62,236	42,756	24	Switzerland 12,314; Denmark 10,288; Belgium-Luxembourg 8,842.
Iron and steel:				
Iron ore and concentrate:				
Excluding roasted pyrite	55,044	47,659	--	West Germany 39,179; France 3,173; Algeria 1,696.
Pyrite, roasted	159	108	--	West Germany 79; Austria 28.
Metal:				
Scrap thousand tons	1,835	1,992	1	India 506; West Germany 397; Belgium-Luxembourg 251.
Pig iron, cast iron, related materials	18,451	18,512	279	West Germany 10,024; United Kingdom 4,115; Belgium-Luxembourg 3,670.
Ferroalloys:				
Ferrochromium	1,714	14,881	--	West Germany 9,216; Belgium-Luxembourg 4,972; France 396.
Ferromanganese	154	103	--	West Germany 77; Belgium-Luxembourg 26.
Ferromolybdenum	289	532	--	Italy 182; France 154; West Germany 109.
Ferronickel	92	13	--	NA.
Ferrosilicochromium	--	25	--	All to France.
Ferrosilicomanganese	--	285	--	Belgium-Luxembourg 248.
Ferrosilicon	230	2,730	--	Japan 1,882; West Germany 715; Belgium-Luxembourg 107.
Silicon metal	2,052	2,147	--	France 1,131; West Germany 995.
Unspecified	1,043	2,634	32	West Germany 979; Sweden 803; Czechoslovakia 178.
Steel, primary forms thousand tons	2,239	2,225	240	Belgium-Luxembourg 321; West Germany 260; Greece 241.

See footnotes at end of table.

Table 2.—Netherlands: Exports of mineral commodities[1] —Continued

(Metric tons unless otherwise specified)

Commodity	1985	1986	Destinations, 1986	
			United States	Other (principal)
METALS —Continued				
Iron and steel —Continued				
Metal —Continued				
Semimanufactures:				
Bars, rods, angles, shapes, sections thousand tons	511	534	14	West Germany 201; Belgium-Luxembourg 147; China 36.
Universals, plates, sheets do.	1,712	1,787	167	West Germany 413; Belgium-Luxembourg 360; United Kingdom 212.
Hoop and strip do.	131	144	(2)	West Germany 59; Switzerland 37; Spain 10.
Rails and accessories do.	38	25	(2)	Italy 20; West Germany 4.
Wire do.	68	68	2	Belgium-Luxembourg 16; West Germany 14; France 11.
Tubes, pipes, fittings do.	490	428	17	West Germany 117; Belgium-Luxembourg 65; United Kingdom 48.
Castings and forgings, rough do.	18	19	(2)	Belgium-Luxembourg 6; West Germany 6; United Kingdom 4.
Lead:				
Oxides	6,607	5,633	—	West Germany 3,838; United Kingdom 547; Yugoslavia 358.
Ash and residue containing lead	7,031	3,524	2	France 1,278; West Germany 977; Belgium-Luxembourg 940.
Metal including alloys:				
Scrap	20,213	17,203	—	West Germany 6,380; France 6,233; Belgium-Luxembourg 2,663.
Unwrought	20,051	20,369	—	West Germany 16,267; Belgium-Luxembourg 1,474; France 966.
Semimanufactures	2,779	2,597	—	Norway 859; Belgium-Luxembourg 495; United Kingdom 416.
Lithium:				
Oxides and hydroxides	27	18	NA	France 12; West Germany 5.
Metal including alloys, all forms	—	(2)	—	All to West Germany.
Magnesium: Metal including alloys:				
Scrap	1,705	1,168	18	West Germany 723; Italy 190; France 150.
Unwrought	4,911	6,207	46	West Germany 3,699; United Kingdom 1,236; France 786.
Semimanufactures	108	14	1	Belgium-Luxembourg 9; West Germany 3.
Manganese:				
Ore and concentrate, metallurgical-grade	47,849	41,166	—	West Germany 9,842; Belgium-Luxembourg 2,686; France 2,333.
Oxides	216	88	17	Saudi Arabia 50; Sri Lanka 19.
Metal including alloys, all forms	1,830	1,241	—	Norway 243; France 212; West Germany 191.
Mercury 76-pound flasks	725	667	—	West Germany 145; Belgium-Luxembourg 116; Romania 87.
Molybdenum:				
Ore and concentrate	18,224	13,699	5	United Kingdom 4,079; Austria 2,409; West Germany 1,900.
Oxides and hydroxides	1,509	945	17	Austria 650; United Kingdom 117; Belgium-Luxembourg 76.
Metal including alloys:				
Scrap	15	14	—	All to West Germany.
Unwrought	53	11	—	Spain 9; West Germany 2.
Semimanufactures	206	195	3	Belgium-Luxembourg 113; France 26; Japan 20.
Nickel:				
Matte and speiss	1,693	2,211	NA	NA.
Ash and residue containing nickel	2,491	1,849	—	Austria 391; West Germany 344; Australia 298.
Metal including alloys:				
Scrap	3,196	4,811	—	Finland 4,091; West Germany 455; India 68.
Unwrought	443	500	—	Belgium-Luxembourg 62; Republic of South Africa 52; Portugal 41.
Semimanufactures	271	360	9	West Germany 157; Belgium-Luxembourg 40; Italy 36.

See footnotes at end of table.

Table 2.—Netherlands: Exports of mineral commodities[1] —Continued

(Metric tons unless otherwise specified)

Commodity	1985	1986	Destinations, 1986	
			United States	Other (principal)
METALS —Continued				
Platinum-group metals:				
Waste and sweepings:				
value, thousands	$18,672	$27,104	--	West Germany $10,049; Belgium-Luxembourg $7,302; France $6,249.
Metals including alloys, unwrought and partly wrought, troy ounces	71,585	58,916	1,294	West Germany 32,297; France 8,074; United Kingdom 3,042.
Rare-earth metals including alloys, all forms	(3)	(3)	--	Mainly to West Germany.
Rhenium: Metal including alloys, all forms	(3)	(3)	--	All to Spain.
Selenium, elemental	3	2	--	NA.
Silicon, high-purity	--	4	--	NA.
Silver:				
Waste and sweepings:				
value, thousands	$6,733	$8,752	--	West Germany $3,855; United Kingdom $2,417; Spain $1,904.
Metal including alloys, unwrought and partly wrought:				
thousand troy ounces	4,281	4,900	NA	West Germany 1,528; Greece 925; Italy 677.
Tellurium, elemental and arsenic	89	44	--	West Germany 20; France 19; Switzerland 6.
Tin:				
Ore and concentrate	--	223	--	U.S.S.R. 162; United Kingdom 61.
Oxides	20	9	--	Belgium-Luxembourg 6; West Germany 3.
Ash and residue containing tin	1,160	1,329	18	Belgium-Luxembourg 863; West Germany 255; United Kingdom 184.
Metal including alloys:				
Scrap	224	174	--	Belgium-Luxembourg 101; United Kingdom 42; West Germany 23.
Unwrought	2,128	3,205	40	West Germany 1,468; France 467; United Kingdom 301.
Semimanufactures	991	1,146	--	West Germany 516; Belgium-Luxembourg 233; France 153.
Titanium:				
Ore and concentrate	30,664	35,733	--	France 5,536; U.S.S.R. 5,000; Romania 4,975.
Oxides	3,536	3,823	--	Italy 1,866; West Germany 154; unspecified 1,687.
Metal including alloys:				
Scrap	32	25	--	United Kingdom 14; West Germany 11.
Unwrought	5	11	--	United Kingdom 10.
Semimanufactures	36	25	(3)	Libya 12; Belgium-Luxembourg 7; West Germany 2.
Tungsten:				
Ore and concentrate	1,166	97	--	Czechoslovakia 62; United Kingdom 21; Austria 12.
Ash and residue containing tungsten	65	47	--	West Germany 37; Austria 10.
Metal including alloys:				
Scrap	291	271	148	West Germany 89; United Kingdom 33.
Unwrought	21	20	--	West Germany 11; France 3; United Kingdom 3.
Semimanufactures	211	219	26	Belgium-Luxembourg 128; West Germany 23.
Uranium and/or thorium: Metal including alloys, all forms, thorium	(3)	(3)	NA	NA.
Vanadium:				
Oxides and hydroxides	--	(3)	NA	NA.
Ash and residue containing vanadium	82	67	--	United Kingdom 36; Belgium-Luxembourg 25; West Germany 6.
Metal including alloys, semimanufactures	(3)	(3)	--	All to West Germany.

See footnotes at end of table.

Table 2.—Netherlands: Exports of mineral commodities[1] —Continued

(Metric tons unless otherwise specified)

Commodity	1985	1986	Destinations, 1986	
			United States	Other (principal)
METALS —Continued				
Zinc:				
Ore and concentrate	--	130	--	All to West Germany.
Blue powder	903	655	--	Belgium-Luxembourg 370; France 147; Saudi Arabia 59.
Matte	3,093	3,582	--	West Germany 2,859; Belgium-Luxembourg 216; France 201.
Ash and residue containing zinc	17,599	13,968	796	West Germany 4,760; Belgium-Luxembourg 3,794; France 3,615.
Metal including alloys:				
Scrap	10,544	11,924	34	West Germany 5,747; Belgium-Luxembourg 3,873; France 1,298.
Unwrought	181,400	181,706	21,060	West Germany 40,847; France 29,560; United Kingdom 26,996.
Semimanufactures	6,091	5,980	--	West Germany 3,501; France 1,503; Belgium-Luxembourg 621.
Zirconium:				
Ore and concentrate	40,008	36,548	--	West Germany 21,996; U.S.S.R. 3,750; France 3,737.
Metal including alloys:				
Scrap	19	(2)	--	NA.
Semimanufactures	(2)	(2)	--	Mainly to France.
Other:				
Ores and concentrates	375	108	--	United Kingdom 44; Belgium-Luxembourg 24; Norway 20.
Oxides and hydroxides	24	120	NA	West Germany 41; Spain 25; Italy 11.
Ashes and residues	3,242	2,695	77	Finland 1,042; West Germany 453; United Kingdom 391.
Base metals including alloys, all forms	2	2	(2)	West Germany 1; France 1.
INDUSTRIAL MINERALS				
Abrasives, n.e.s.:				
Natural: Corundum, emery, pumice, etc	8,137	6,451	(2)	Belgium-Luxembourg 1,321; Thailand 1,112; United Kingdom 541.
Artificial: Corundum	121	98	--	West Germany 36; Belgium-Luxembourg 32; France 16.
Dust and powder of precious and semiprecious stones including diamond kilograms	77	110	2	United Kingdom 24; West Germany 21; Belgium-Luxembourg 16.
Grinding and polishing wheels and stones	5,341	6,446	10	West Germany 1,783; United Kingdom 1,339; France 835.
Asbestos, crude	50	177	--	East Germany 95; West Germany 47; Belgium-Luxembourg 29.
Barite and witherite	64,442	42,091	143	United Kingdom 17,773; West Germany 8,603; Denmark 6,855.
Boron materials:				
Crude natural borates	37,362	30,498	NA	West Germany 2,930; Australia 1,564; unspecified 22,322.
Oxides and acids	731	1,049	6	West Germany 390; Czechoslovakia 128; Finland 108.
Bromine	2,030	616	--	France 282; West Germany 184; Belgium-Luxembourg 69.
Cement	502,736	440,305	1,659	Belgium-Luxembourg 182,733; West Germany 156,404; United Kingdom 40,861.
Chalk	21,385	22,102	3	Belgium-Luxembourg 20,970; West Germany 1,022; Netherlands Antilles 38.
Clays, crude:				
Bentonite	30,572	30,405	--	West Germany 8,471; Belgium-Luxembourg 7,727; Nigeria 2,780.
Chamotte earth	2,761	611	--	Belgium-Luxembourg 486; West Germany 74; Denmark 35.
Fuller's earth	301	575	--	West Germany 306; Belgium-Luxembourg 94.

See footnotes at end of table.

Table 2.—Netherlands: Exports of mineral commodities[1] —Continued

(Metric tons unless otherwise specified)

Commodity	1985	1986	Destinations, 1986	
			United States	Other (principal)
INDUSTRIAL MINERALS —Continued				
Clays, crude —Continued				
Kaolin	119,020	132,268	--	Belgium-Luxembourg 94,530; West Germany 32,192; France 2,156.
Unspecified	r103,055	97,135	--	West Germany 58,767; Belgium-Luxembourg 34,060; Sweden 1,419.
Cryolite and chiolite	2	--		
Diamond:				
Gem, not set or strung ... carats	373,231	392,617	56,395	Belgium-Luxembourg 147,035; Switzerland 136,622.
Industrial stones ... do.	762,316	1,180,953	234,980	Belgium-Luxembourg 285,605; Hong Kong 263,607.
Diatomite and other infusorial earth	1,796	486	--	Belgium-Luxembourg 196; Singapore 41; France 38.
Feldspar, fluorspar, related materials:				
Feldspar	1,421	1,114	--	France 905; West Germany 76; Trinidad and Tobago 60.
Fluorspar	224	408	--	India 219; Belgium-Luxembourg 140; West Germany 24.
Unspecified	18,163	16,128	--	West Germany 9,898; Belgium-Luxembourg 2,973; Italy 1,574.
Fertilizer materials:				
Crude, n.e.s	139,153	140,541	--	Belgium-Luxembourg 106,922; West Germany 27,539; France 5,577.
Manufactured:				
Ammonia ... thousand tons	1,095	927	--	Belgium-Luxembourg 419; West Germany 229; United Kingdom 178.
Nitrogenous ... do.	3,768	3,076	243	France 1,049; West Germany 823; United Kingdom 416.
Phosphatic ... do.	342	353	--	United Kingdom 141; France 118; West Germany 44.
Potassic ... do.	7	11	(2)	Belgium-Luxembourg 5; United Kingdom 3; Egypt 1.
Unspecified and mixed ... do.	1,044	1,113	--	France 263; West Germany 192; unspecified 382.
Graphite, natural	89	87	9	West Germany 49; France 14.
Gypsum and plaster	42,153	53,692	--	Belgium-Luxembourg 47,652; West Germany 2,790; United Kingdom 2,760.
Iodine	14	12	--	Cuba 3; China 2; Iran 2.
Kyanite and related materials	2,164	2,531	--	West Germany 1,921; France 291; Norway 70.
Lime	13,163	4,685	--	Belgium-Luxembourg 2,457; West Germany 1,214; Italy 450.
Magnesium compounds:				
Magnesite, crude	1,049	1,618	--	West Germany 948; Belgium-Luxembourg 501; France 69.
Oxides and hydroxides	34,042	109,775	74	West Germany 18,996; France 3,154; unspecified 76,873.
Other	760	424	--	Belgium-Luxembourg 249; West Germany 131; Austria 24.
Mica:				
Crude including splittings and waste	1,458	1,001	--	Nigeria 150; Norway 123; Egypt 120.
Worked including agglomerated splittings	4	1	--	Mainly to Belgium-Luxembourg.
Nitrates, crude	424	234	--	West Germany 114; Belgium-Luxembourg 113; Ireland 7.
Phosphates, crude	57,174	21,876	--	France 11,882; West Germany 9,536; Belgium-Luxembourg 450.
Pigments, mineral:				
Natural, crude	51	64	--	France 32; Belgium-Luxembourg 22; United Kingdom 7.
Iron oxides and hydroxides, processed	6,611	5,467	807	West Germany 1,758; France 1,605.
Potassium salts, crude	108	107	--	West Germany 90.
Precious and semiprecious stones other than diamond:				
Natural ... kilograms	2,436	2,713	NA	West Germany 1,043; Belgium-Luxembourg 660.
Synthetic ... do.	748	1,929	--	Mainly to Japan.

See footnotes at end of table.

Table 2.—Netherlands: Exports of mineral commodities[1] —Continued

(Metric tons unless otherwise specified)

Commodity	1985	1986	Destinations, 1986	
			United States	Other (principal)
INDUSTRIAL MINERALS —Continued				
Pyrite, unroasted	--	13	--	Sweden 10; France 3.
Quartz crystal, piezoelectric kilograms	11	--	--	
Salt and brine thousand tons	2,663	2,646	--	Belgium-Luxembourg 787; Ireland 8; unspecified 1,874.
Sodium compounds, n.e.s.: Carbonate, manufactured	162,749	159,668	--	West Germany 56,009; Belgium-Luxembourg 26,176; Denmark 13,438.
Stone, sand and gravel:				
Dimension stone:				
Crude and partly worked thousand tons	19	13	(2)	West Germany 9; Belgium-Luxembourg 3.
Worked do	58	72	(2)	West Germany 42; Belgium-Luxembourg 28; Austria 1.
Dolomite, chiefly refractory-grade do	25	21	--	Belgium-Luxembourg 9; West Germany 8; United Kingdom 1.
Gravel and crushed rock do	2,634	2,682	(2)	Belgium-Luxembourg 2,431; West Germany 231; United Kingdom 13.
Limestone other than dimension do	1	(2)	--	Mainly to West Germany.
Quartz and quartzite do	14	13	(2)	West Germany 8; Austria 1; Belgium-Luxembourg 1.
Sand other than metal-bearing do	8,196	8,575	--	Belgium-Luxembourg 8,133; West Germany 346; United Kingdom 15.
Sulfur:				
Elemental:				
Crude including native and by-product	22,288	29,104	--	Belgium-Luxembourg 23,169; France 4,468; West Germany 1,466.
Colloidal, precipitated, sublimed	8	24	--	All to West Germany.
Dioxide	920	825	--	France 662; Belgium-Luxembourg 117; Ireland 94.
Sulfuric acid	158,899	193,397	1,995	West Germany 111,110; Belgium-Luxembourg 67,710; United Kingdom 5,028.
Talc, steatite, soapstone, pyrophyllite	7,762	8,817	17	West Germany 4,405; Belgium-Luxembourg 2,137; Italy 1,167.
Vermiculite, perlite, chlorite	371	476	--	West Germany 402.
Other:				
Crude	368,215	396,691	191	Belgium-Luxembourg 389,199; West Germany 54,355; France 12,773.
Slag and dross, not metal-bearing	612,181	789,666	2,058	Belgium-Luxembourg 395,581; United Kingdom 114,896; France 77,714.
MINERAL FUELS AND RELATED MATERIALS				
Asphalt and bitumen, natural	1,313	1,122	--	Belgium-Luxembourg 1,052; West Germany 63; Denmark 3.
Carbon:				
Carbon black	98,130	100,255	27	Belgium-Luxembourg 23,263; France 23,046; West Germany 20,464.
Gas carbon	4	1	--	All to Belgium-Luxembourg.
Coal:				
Anthracite thousand tons	322	215	--	Belgium-Luxembourg 160; Ireland 15; United Kingdom 15.
Bituminous do	1,463	2,166	--	United Kingdom 588; West Germany 401; Belgium-Luxembourg 281.
Briquets of anthracite and bituminous coal do	4	2	--	Mainly to Belgium-Luxembourg.
Lignite including briquets do	5	4	--	Belgium-Luxembourg 2; United Kingdom 2.

See footnotes at end of table.

Table 2.—Netherlands: Exports of mineral commodities[1] —Continued

(Metric tons unless otherwise specified)

Commodity	1985	1986	Destinations, 1986	
			United States	Other (principal)
MINERAL FUELS AND RELATED MATERIALS —Continued				
Coke and semicoke thousand tons	995	928	--	Belgium-Luxembourg 416; France 270; West Germany 152.
Gas, natural: Gaseous million cubic feet	1,412,804	1,165,813	--	West Germany 630,516; France 195,176; Italy 176,026.
Peat including briquets and litter	281,842	301,057	14	Belgium-Luxembourg 105,665; France 93,217; West Germany 61,991.
Petroleum:				
Crude thousand 42-gallon barrels	9,053	9,286	--	Belgium-Luxembourg 5,510; United Kingdom 3,377; West Germany 344.
Refinery products:				
Liquefied petroleum gas do.	8,185	7,460	60	Belgium-Luxembourg 2,779; West Germany 2,627; United Kingdom 764.
Gasoline do.	77,810	86,777	6,800	West Germany 41,769; United Kingdom 11,195; Belgium-Luxembourg 11,084.
Mineral jelly and wax do.	422	507	9	France 145; West Germany 129; United Kingdom 56.
Kerosene and jet fuel do.	24,085	24,972	4,650	West Germany 13,487; United Kingdom 2,597; bunkers 2,296.
Distillate fuel oil do.	112,474	134,340	(2)	West Germany 88,655; Belgium-Luxembourg 25,436; bunkers 6,186.
Lubricants do.	4,793	4,565	229	Belgium-Luxembourg 923; Sweden 298; West Germany 342.
Residual fuel oil do.	89,817	85,155	2,634	United Kingdom 14,350; West Germany 13,540; bunkers 34,013.
Bitumen and other residues do.	1,531	2,329	--	West Germany 481; Belgium-Luxembourg 431; Norway 324.
Bituminous mixtures do.	229	559	(2)	West Germany 462; Belgium-Luxembourg 62; United Kingdom 4.
Petroleum coke do.	402	186	NA	NA.

[1]Revised. NA Not available.
[2]Table prepared by Josef Plachy.
[3]Less than 1/2 unit.

Table 3.—Netherlands: Imports of mineral commodities[1]

(Metric tons unless otherwise specified)

Commodity	1985	1986	Sources, 1986	
			United States	Other (principal)
METALS				
Alkali and alkaline-earth metals:				
Alkali metals	138	107	--	West Germany 44; Sweden 30; United Kingdom 25.
Alkaline-earth metals	22	32	--	Canada 11; China 8; France 8.
Aluminum:				
Ore and concentrate	162,384	162,760	771	Greece 151,286; Guyana 5,250; China 4,295.
Oxides and hydroxides	569,116	641,595	634	Jamaica 281,547; Suriname 275,312; West Germany 42,176.
Ash and residue containing aluminum	13,073	13,348	--	West Germany 5,799; Belgium-Luxembourg 3,906; East Germany 1,174.

See footnote at end of table.

Table 3.—Netherlands: Imports of mineral commodities[1] —Continued

(Metric tons unless otherwise specified)

Commodity	1985	1986	Sources, 1986	
			United States	Other (principal)
METALS —Continued				
Aluminum —Continued				
Metal including alloys:				
Scrap	67,179	76,325	2,587	West Germany 25,671; Belgium-Luxembourg 13,950; United Kingdom 6,028.
Unwrought	135,210	151,131	276	Norway 49,919; West Germany 33,225; Romania 15,330.
Semimanufactures	124,017	134,472	2,845	West Germany 44,031; Belgium-Luxembourg 32,393; France 11,425.
Antimony:				
Ore and concentrate	5	--		
Oxides	1,115	1,125	15	Belgium-Luxembourg 366; France 346; United Kingdom 171.
Metal including alloys, all forms	99	64	8	Hong Kong 2[e]; Spain 11.
Arsenic: Oxides and acids	107	95	--	United Kingdom 80; France 11; West Germany 2.
Beryllium:				
Oxides and hydroxides	(2)	--		
Metal including alloys, all forms	12	1	(2)	Mainly from West Germany.
Bismuth: Metal including alloys, all forms	46	21	NA	Belgium-Luxembourg 14; West Germany 1.
Cadmium: Metal including alloys, all forms	129	53	--	France 15; West Germany 13; United Kingdom 6.
Cesium and rubidium: Metal including alloys, all forms	(2)	1	--	All from West Germany.
Chromium:				
Ore and concentrate	40,239	38,247	--	Republic of South Africa 37,469; West Germany 713; Belgium-Luxembourg 30.
Oxides and hydroxides	1,879	1,545	375	West Germany 473; United Kingdom 238.
Metal including alloys, all forms	120	67	NA	France 37; China 10; United Kingdom 10.
Cobalt:				
Oxides and hydroxides	2	(2)	--	All from France.
Ash and residue containing cobalt	253	280	29	Belgium-Luxembourg 149; Finland 69.
Metal including alloys, all forms	177	66	2	United Kingdom 24; Spain 10; West Germany 7.
Columbium and tantalum:				
Ore and concentrate	93	--		
Metal including alloys, all forms:				
Columbium (niobium)	2	3	1	Brazil 1; United Kingdom 1.
Tantalum	5	1	(2)	Mainly from West Germany.
Copper:				
Ore and concentrate	256	308	--	All from Belgium-Luxembourg.
Matte and speiss including cement copper	26	257	--	West Germany 248; Belgium-Luxembourg 8.
Oxides and hydroxides	734	567	--	Italy 183; Norway 111; United Kingdom 103.
Sulfate	6,781	5,541	--	Belgium-Luxembourg 2,133; West Germany 1,286; Poland 873.
Ash and residue containing copper	4,072	2,232	21	West Germany 1,077; France 432; Cuba 163.
Metal including alloys:				
Scrap	62,001	57,512	2,346	West Germany 18,098; Belgium-Luxembourg 10,178; United Kingdom 6,411.
Unwrought	21,282	24,101	1,442	Canada 5,182; East Germany 3,607; West Germany 3,473.
Semimanufactures	97,448	97,979	261	West Germany 41,899; Belgium-Luxembourg 34,680; France 11,082.
Germanium: Metal including alloys, all forms	(2)	1	(2)	Mainly from West Germany.
Gold:				
Waste and sweepings value, thousands	$8,934	$5,696	--	Belgium-Luxembourg $2,887; Denmark $2,095; West Germany $551.

See footnotes at end of table.

Table 3.—Netherlands: Imports of mineral commodities[1] —Continued

(Metric tons unless otherwise specified)

Commodity	1985	1986	Sources, 1986	
			United States	Other (principal)
METALS —Continued				
Gold —Continued				
Metal including alloys, unwrought and partly wrought _ troy ounces	188,688	162,009	4,063	United Kingdom 83,432; West Germany 40,189; Switzerland 12,598.
Hafnium: Metal including alloys, all forms	(2)	(2)	(2)	
Iron and steel:				
Iron ore and concentrate:				
Excluding roasted pyrite thousand tons	8,507	7,066	--	Brazil 2,000; Sweden 1,343; Australia 1,026.
Pyrite, roasted do	1	(2)	--	Mainly from Belgium-Luxembourg.
Metal:				
Scrap	586,431	849,806	2,590	West Germany 442,746; United Kingdom 186,669; Belgium-Luxembourg 160,708.
Pig iron, cast iron, related materials	49,929	56,721	14	West Germany 17,851; Brazil 14,996; France 7,232.
Ferroalloys:				
Ferrochromium	2,798	16,083	NA	Albania 13,561; West Germany 858; Belgium-Luxembourg 641.
Ferromanganese	22,664	17,046	--	Norway 7,300; France 6,383; West Germany 2,525.
Ferromolybdenum	502	563	NA	United Kingdom 490; Austria 31.
Ferronickel	86	254	NA	West Germany 90; Taiwan 53; Portugal 44.
Ferrosilicochromium	61	95	NA	West Germany 50; Norway 20.
Ferrosilicomanganese	5,737	6,486	NA	Norway 2,150; Republic of South Africa 1,487; France 1,254.
Ferrosilicon	5,063	7,972	NA	West Germany 3,342; U.S.S.R. 2,735; Norway 841.
Silicon metal	4,736	4,313	--	West Germany 1,426; Brazil 1,101; Norway 656.
Unspecified	2,035	3,451	NA	U.S.S.R. 2,237; France 528; United Kingdom 234.
Steel, primary forms	456,100	468,347	139	West Germany 164,519; Belgium-Luxembourg 90,102; Italy 41,940.
Semimanufactures:				
Bars, rods, angles, shapes, sections _ thousand tons	1,302	1,428	(2)	Belgium-Luxembourg 496; West Germany 480; France 142.
Universals, plates, sheets do	1,120	1,136	1	Belgium-Luxembourg 477; West Germany 349; France 62.
Hoop and strip do	237	258	(2)	West Germany 157; Belgium-Luxembourg 58; France 19.
Rails and accessories do	57	40	(2)	West Germany 28; France 8; Belgium-Luxembourg 2.
Wire do	107	104	(2)	West Germany 48; Belgium-Luxembourg 34; France 9.
Tubes, pipes, fittings do	781	722	2	West Germany 395; France 84; Belgium-Luxembourg 61.
Castings and forgings, rough do	25	21	(2)	West Germany 12; Belgium-Luxembourg 4; United Kingdom 1.
Lead:				
Ore and concentrate	1	2	--	All from Belgium-Luxembourg.
Oxides	6,165	5,579	5	West Germany 4,725; Belgium-Luxembourg 676; France 160.
Ash and residue containing lead	2,529	1,332	--	West Germany 691; Belgium-Luxembourg 266; Finland 118.
Metal including alloys:				
Scrap	24,593	19,257	589	West Germany 10,653; Belgium-Luxembourg 2,352; United Kingdom 2,210.
Unwrought	35,509	36,910	66	Belgium-Luxembourg 16,740; West Germany 7,220; France 5,750.
Semimanufactures	8,600	9,452	14	Belgium-Luxembourg 7,849; West Germany 899; United Kingdom 659.

See footnotes at end of table.

Table 3.—Netherlands: Imports of mineral commodities[1] —Continued

(Metric tons unless otherwise specified)

Commodity	1985	1986	Sources, 1986	
			United States	Other (principal)
METALS —Continued				
Lithium:				
Oxides and hydroxides	102	83	32	West Germany 30; U.S.S.R. 20.
Metal including alloys, all forms	11	1	--	All from West Germany.
Magnesium: Metal including alloys:				
Scrap	1,457	1,297	60	West Germany 372; France 119; Sweden 102.
Unwrought	6,310	8,243	6,659	Norway 1,439; France 45.
Semimanufactures	308	276	6	West Germany 85; Switzerland 52; United Kingdom 40.
Manganese:				
Ore and concentrate, metallurgical-grade	72,493	130,177	NA	Italy 1,297; West Germany 760; unspecified 127,850.
Oxides	160	269	220	Belgium-Luxembourg 37; West Germany 12.
Metal including alloys, all forms	2,113	2,004	346	Republic of South Africa 1,206; China 187.
Mercury 76-pound flasks	754	24,940	--	Finland 290; Belgium-Luxembourg 208; West Germany 174.
Molybdenum:				
Ore and concentrate	24,061	22,961	13,435	China 4,361; Chile 3,515.
Oxides and hydroxides	24	30	20	West Germany 10.
Metal including alloys:				
Scrap	2	4	--	All from France.
Unwrought	145	79	--	West Germany 78; Belgium-Luxembourg 1.
Semimanufactures	39	33	(2)	Belgium-Luxembourg 23; Austria 8; France 1.
Nickel:				
Ore and concentrate	3	4	--	All from France.
Matte and speiss	2,025	133,222	NA	NA.
Oxides and hydroxides	314	141	--	Belgium-Luxembourg 10; West Germany 7; unspecified 120.
Ash and residue containing nickel	1,774	1,498	123	West Germany 856; France 304.
Metal including alloys:				
Scrap	3,141	3,137	459	Canada 997; West Germany 577.
Unwrought	1,771	3,115	14	U.S.S.R. 1,884; Belgium-Luxembourg 237; Norway 120.
Semimanufactures	985	1,141	120	West Germany 403; United Kingdom 250; Belgium-Luxembourg 155.
Platinum-group metals:				
Waste and sweepings:				
value, thousands	$1,414	$994	$1	Iran $391; Belgium-Luxembourg $317; Sweden $102.
Metals including alloys, unwrought and partly wrought troy ounces	91,186	86,268	20,702	West Germany 19,835; Switzerland 17,326.
Rare-earth metals including alloys, all forms	11	28	(2)	Austria 20; France 7.
Rhenium: Metal including alloys, all forms	11	9	1	Belgium-Luxembourg 5; West Germany 2; France 1.
Selenium, elemental	10	8	--	Canada 3; unspecified 5.
Silicon, high-purity	74	20	--	West Germany 18; Italy 2.
Silver:				
Waste and sweepings:				
value, thousands	$1,656	$1,125	--	Belgium-Luxembourg $392; France $183; United Kingdom $182.
Metal including alloys, unwrought and partly wrought thousand troy ounces	3,771	5,075	177	West Germany 1,782; United Kingdom 858; Spain 780.
Tellurium, elemental and arsenic	96	87	(2)	Sweden 34; Belgium-Luxembourg 3.
Tin:				
Ore and concentrate	10,677	9,986	--	United Kingdom 5,505; Zaire 2,169; Burma 803.
Oxides	171	189	(2)	United Kingdom 88; France 47; West Germany 47.
Ash and residue containing tin	891	202	37	West Germany 64; Republic of South Africa 53.

See footnotes at end of table.

Table 3.—Netherlands: Imports of mineral commodities[1] —Continued

(Metric tons unless otherwise specified)

Commodity	1985	1986	Sources, 1986	
			United States	Other (principal)
METALS —Continued				
Tin —Continued				
Metal including alloys:				
Scrap	455	355	--	West Germany 117; Italy 87; United Kingdom 56.
Unwrought	3,170	2,671	55	Belgium-Luxembourg 972; United Kingdom 763; West Germany 272.
Semimanufactures	307	202	(3)	United Kingdom 110; West Germany 68; Belgium-Luxembourg 10.
Titanium:				
Ore and concentrate	39,830	47,466	--	Sierra Leone 15,936; Australia 14,141; Republic of South Africa 9,731.
Oxides	6,892	5,823	96	West Germany 2,116; United Kingdom 1,311; France 964.
Metal including alloys:				
Scrap	38	63	35	United Kingdom 12.
Unwrought	53	65	--	U.S.S.R. 50; West Germany 15.
Semimanufactures	124	106	18	West Germany 45; United Kingdom 20.
Tungsten:				
Ore and concentrate	1,145	227	--	Portugal 206; United Kingdom 15; Hungary 5.
Oxides and hydroxides	7	5	--	West Germany 4; Italy 1.
Ash and residue containing tungsten	42	33	10	Sweden 12; West Germany 10.
Metal including alloys:				
Scrap	41	53	17	Sweden 25; United Kingdom 8.
Unwrought	378	563	491	West Germany 72.
Semimanufactures	32	45	4	Belgium-Luxembourg 30; West Germany 4.
Uranium and/or thorium:				
Ore and concentrate	--	18	--	All from Republic of South Africa.
Metal including alloys, all forms:				
Uranium	(2)	(2)	--	All from United Kingdom.
Thorium	(2)	19	--	All from West Germany.
Vanadium:				
Oxides and hydroxides	7	30	--	West Germany 21; Finland 6.
Ash and residue containing vanadium	1,028	1,957	--	Belgium-Luxembourg 1,950.
Metal including alloys:				
Scrap	--	(2)	(2)	
Unwrought	(2)	1	--	All from West Germany.
Semimanufactures	(2)	1	(2)	Mainly from West Germany.
Zinc:				
Ore and concentrate	444,706	396,439	--	Canada 110,643; Ireland 101,131; Australia 68,558.
Oxides	3,348	3,500	41	West Germany 1,554; France 491; Belgium-Luxembourg 356.
Blue powder	3,729	2,552	--	West Germany 1,269; Norway 621; Belgium-Luxembourg 423.
Matte	4,550	2,868	--	West Germany 1,446; Belgium-Luxembourg 864; France 498.
Ash and residue containing zinc	20,103	22,146	--	Belgium-Luxembourg 18,266; West Germany 2,397; Cuba 674.
Metal including alloys:				
Scrap	12,290	11,686	--	West Germany 5,022; Belgium-Luxembourg 4,257; United Kingdom 1,473.
Unwrought	22,229	26,477	--	Belgium-Luxembourg 10,484; West Germany 7,497; Finland 3,155.
Semimanufactures	5,794	5,406	(3)	West Germany 3,559; Belgium-Luxembourg 1,135; France 307.
Zirconium:				
Ore and concentrate	40,856	38,464	--	Australia 28,037; Republic of South Africa 8,487; India 1,589.
Metal including alloys:				
Scrap	15	7	--	West Germany 4; United Kingdom 2.
Unwrought	1	(2)	--	All from West Germany.

See footnotes at end of table.

Table 3.—Netherlands: Imports of mineral commodities[1] —Continued

(Metric tons unless otherwise specified)

Commodity	1985	1986	Sources, 1986	
			United States	Other (principal)
METALS —Continued				
Other:				
Ores and concentrates	117	56	--	West Germany 38; Australia 18.
Oxides and hydroxides	180	209	21	Belgium-Luxembourg 67; West Germany 49; Spain 32.
Ashes and residues	42,330	50,240	80	Canada 45,157; West Germany 3,355; Belgium-Luxembourg 1,124.
Base metals including alloys, all forms	1	1	(2)	Mainly from Belgium-Luxembourg.
INDUSTRIAL MINERALS				
Abrasives, n.e.s.:				
Natural: Corundum, emery, pumice, etc	370,845	279,716	20	West Germany 269,467; Belgium-Luxembourg 6,265; Turkey 1,750.
Artificial:				
Corundum	7,435	7,229	20	West Germany 5,273; France 722; Czechoslovakia 360.
Silicon carbide	1,471	2,064	8	West Germany 1,511; Norway 213; Belgium-Luxembourg 131.
Dust and powder of precious and semi-precious stones including diamond kilograms	239	189	NA	Belgium-Luxembourg 107; Switzerland 39; Ireland 37.
Grinding and polishing wheels and stones	3,329	4,836	62	France 1,707; West Germany 1,639; Austria 438.
Asbestos, crude	5,625	7,087	4	Canada 3,385; Greece 2,096; Italy 1,368.
Barite and witherite	94,843	62,341	--	China 30,442; Belgium-Luxembourg 17,191; Morocco 7,650.
Boron materials:				
Crude natural borates	52,957	32,019	10,160	Belgium-Luxembourg 10,981; Turkey 10,742.
Elemental	(2)	--	--	--
Oxides and acids	1,988	2,353	807	France 731; Italy 312.
Bromine	807	7,627	--	Israel 7,506; United Kingdom 72; Belgium-Luxembourg 40.
Cement thousand tons	2,838	3,075	(2)	Belgium-Luxembourg 1,514; West Germany 1,509; Poland 26.
Chalk	103,313	97,268	--	France 51,486; West Germany 28,880; Belgium-Luxembourg 15,428.
Clays, crude:				
Bentonite	74,619	85,191	12,601	Greece 59,180; Italy 5,361.
Chamotte earth	19,022	21,246	6,113	West Germany 12,437; France 2,629.
Fuller's earth	3,455	4,882	400	West Germany 2,363; United Kingdom 969; Spain 454.
Kaolin	454,237	460,099	62,970	United Kingdom 177,618; West Germany 68,285; Spain 63,752.
Unspecified	r467,683	662,339	64	West Germany 625,715; France 12,179; United Kingdom 9,629.
Cryolite and chiolite	33	349	--	Denmark 276; France 25; Austria 24.
Diamond:				
Gem, not set or strung carats	662,107	494,179	30,519	Switzerland 289,628; Belgium-Luxembourg 82,939; Zaire 34,901.
Industrial stones do	567,090	1,130,572	242,643	United Kingdom 466,525; Belgium-Luxembourg 237,453.
Diatomite and other infusorial earth	64,815	77,143	2,281	Belgium-Luxembourg 60,082; Denmark 13,391.
Feldspar, fluorspar, related materials:				
Feldspar	20,167	19,749	--	Norway 13,070; West Germany 4,740; Italy 1,128.
Fluorspar	27,152	23,148	--	Spain 9,312; East Germany 9,157; West Germany 795.
Unspecified	44,018	39,094	--	Canada 29,028; Norway 9,216; West Germany 778.
Fertilizer materials:				
Crude, n.e.s	150,117	153,494	--	West Germany 129,560; Belgium-Luxembourg 20,672; Italy 2,359.

See footnotes at end of table.

Table 3.—Netherlands: Imports of mineral commodities[1] —Continued

(Metric tons unless otherwise specified)

Commodity	1985	1986	Sources, 1986	
			United States	Other (principal)
INDUSTRIAL MINERALS —Continued				
Fertilizer materials —Continued				
Manufactured:				
Ammonia	95,327	70,854	—	Trinidad and Tobago 11,986; United Kingdom 7,982; West Germany 4,934.
Nitrogenous	723,925	791,602	44	Belgium-Luxembourg 303,557; West Germany 224,244; France 73,286.
Phosphatic	154,660	185,433	—	Israel 77,070; Belgium-Luxembourg 42,314; West Germany 33,264.
Potassic	432,791	457,942	16,281	West Germany 127,831; Belgium-Luxembourg 67,780; U.S.S.R. 67,710.
Unspecified and mixed	271,522	224,485	926	Belgium-Luxembourg 83,373; West Germany 49,390; Israel 20,092.
Graphite, natural	636	1,204	—	China 616; West Germany 385; United Kingdom 116.
Gypsum and plaster	426,389	454,205	106	West Germany 207,612; France 120,880; Belgium-Luxembourg 84,030.
Iodine	458	376	1	Guatemala 10; Canada 4; unspecified 357.
Kyanite and related materials	11,818	9,876	199	Republic of South Africa 7,909; West Germany 1,357.
Lime	882,591	837,550	—	Belgium-Luxembourg 547,345; West Germany 289,848; France 237.
Magnesium compounds:				
Magnesite, crude	3,933	1,939	—	Greece 1,363; Italy 264; Belgium-Luxembourg 212.
Oxides and hydroxides	77,042	80,890	446	China 31,799; Greece 23,345; Austria 7,920.
Sulfate	36,779	34,555	—	West Germany 32,825; Belgium-Luxembourg 820; Greece 815.
Mica:				
Crude including splittings and waste	2,900	1,880	126	Canada 392; United Kingdom 355; India 343.
Worked including agglomerated splittings	50	60	5	Belgium-Luxembourg 34; Switzerland 12; Japan 5.
Nitrates, crude	24,634	26,864	—	Chile 17,456; Belgium-Luxembourg 9,317; West Germany 91.
Phosphates, crude thousand tons	2,388	2,053	493	Morocco 735; Israel 553.
Phosphorus, elemental	55	65	—	West Germany 63; United Kingdom 2.
Pigments, mineral:				
Natural, crude	139	393	—	Belgium-Luxembourg 215; Cyprus 143; Italy 30.
Iron oxides and hydroxides, processed	12,137	10,114	100	West Germany 8,374; United Kingdom 640; Italy 465.
Potassium salts, crude	2,708	3,757	—	West Germany 3,697; Belgium-Luxembourg 60.
Precious and semiprecious stones other than diamond:				
Natural kilograms	39,629	22,954	5,000	West Germany 7,469; Brazil 5,000.
Synthetic do.	9,482	7,469	NA	Japan 7,306; Belgium-Luxembourg 8; West Germany 3.
Pyrite, unroasted	204	243	—	West Germany 181; Belgium-Luxembourg 62.
Salt and brine	412,093	336,495	75	West Germany 97,619; Belgium-Luxembourg 85,402; France 51,053.
Sodium compounds, n.e.s.: Carbonate, manufactured	65,374	56,019	1	West Germany 51,450; Poland 1,984; East Germany 1,714.
Stone, sand and gravel:				
Dimension stone:				
Crude and partly worked thousand tons	1,489	1,248	(2)	West Germany 696; Belgium-Luxembourg 500; France 16.
Worked do.	66	93	(2)	West Germany 36; Italy 32; Belgium-Luxembourg 8.

See footnotes at end of table.

Table 3.—Netherlands: Imports of mineral commodities[1] —Continued

(Metric tons unless otherwise specified)

Commodity	1985	1986	Sources, 1986	
			United States	Other (principal)
INDUSTRIAL MINERALS —Continued				
Stone, sand and gravel —Continued				
Dolomite, chiefly refractory-grade thousand tons	939	852	—	Belgium-Luxembourg 732; United Kingdom 42; Norway 37.
Gravel and crushed rock do.	16,740	18,954	(2)	West Germany 10,894; Belgium-Luxembourg 6,145; France 1,369.
Limestone other than dimension do.	476	620	—	Belgium-Luxembourg 549; West Germany 59; France 12.
Quartz and quartzite do.	22	25	(2)	West Germany 14; Norway 8; Belgium-Luxembourg 3.
Sand other than metal-bearing do.	6,856	7,462	3	West Germany 5,433; Belgium-Luxembourg 1,719; Norway 288.
Sulfur:				
Elemental:				
Crude including native and byproduct	377,044	289,455	2,259	West Germany 219,928; France 24,628; Belgium-Luxembourg 11,694.
Colloidal, precipitated, sublimed	603	213	—	United Kingdom 110; West Germany 103.
Dioxide	7,526	7,548	(2)	West Germany 6,735; Belgium-Luxembourg 498; France 315.
Sulfuric acid	566,884	591,579	(2)	West Germany 209,008; Finland 113,569; Belgium-Luxembourg 92,646.
Talc, steatite, soapstone, pyrophyllite	42,241	46,910	194	France 12,224; Austria 6,075; West Germany 4,712.
Vermiculite, perlite, chlorite	9,146	5,676	—	Republic of South Africa 2,779; Greece 2,187; West Germany 545.
Other:				
Crude thousand tons	1,442	1,043	8	West Germany 563; Belgium-Luxembourg 454.
Slag and dross, not metal-bearing do.	1,786	1,675	(2)	West Germany 1,057; Belgium-Luxembourg 617.
MINERAL FUELS AND RELATED MATERIALS				
Asphalt and bitumen, natural	4,995	5,049	779	Belgium-Luxembourg 2,309; West Germany 1,817.
Carbon:				
Carbon black	15,196	12,506	826	West Germany 9,004; United Kingdom 717.
Gas carbon	1,520	1,413	115	West Germany 618; United Kingdom 618.
Coal:				
Anthracite thousand tons	388	344	7	Republic of South Africa 213; West Germany 112.
Bituminous do.	11,106	11,944	4,857	Australia 4,073; Republic of South Africa 1,278.
Briquets of anthracite and bituminous coal do.	11	4	—	Mainly from West Germany.
Lignite including briquets do.	150	132	—	West Germany 107; Belgium-Luxembourg 22; East Germany 3.
Coke and semicoke do.	525	577	29	United Kingdom 208; West Germany 201; Argentina 41.
Gas, natural million cubic feet	73,840	70,155	—	West Germany 70,112; France 43.
Peat including briquets and litter	746,901	761,861	—	West Germany 710,101; Finland 23,099; U.S.S.R. 9,725.
Petroleum:				
Crude thousand 42-gallon barrels	296,698	345,129	—	Saudi Arabia 71,872; United Kingdom 67,615; Norway 39,392.
Refinery products:				
Liquefied petroleum gas do.	24,743	21,400	(2)	United Kingdom 10,084; Algeria 4,371; Belgium-Luxembourg 2,840.
Gasoline do.	46,921	41,712	108	U.S.S.R. 7,477; Algeria 7,279; Kuwait 4,930.

See footnotes at end of table.

Table 3.—Netherlands: Imports of mineral commodities[1] —Continued

(Metric tons unless otherwise specified)

Commodity	1985	1986	Sources, 1986	
			United States	Other (principal)
MINERAL FUELS AND RELATED MATERIALS —Continued				
Petroleum —Continued				
Refinery products —Continued				
Mineral jelly and wax thousand 42-gallon barrels	527	604	2	West Germany 201; France 123; Austria 99.
Kerosene and jet fuel do	2,457	2,627	400	Belgium-Luxembourg 1,462; United Kingdom 399.
Distillate fuel oil do	51,063	42,264	3,095	U.S.S.R. 26,249; Kuwait 4,389.
Lubricants do	2,318	2,257	134	United Kingdom 552; Belgium-Luxembourg 475; Italy 283.
Residual fuel oil do	32,189	13,800	NA	U.S.S.R. 5,413; Belgium-Luxembourg 2,221; Italy 283.
Bitumen and other residues do	668	800	NA	Belgium-Luxembourg 483; West Germany 309; France 2.
Bituminous mixtures do	122	565	2	West Germany 450; Belgium-Luxembourg 81; Italy 17.
Petroleum coke do	2,516	2,460	1,307	Norway 432; West Germany 376.

[r]Revised. NA Not available.
[1]Table prepared by Jozef Plachy.
[2]Less than 1/2 unit.

COMMODITY REVIEW

METALS

Aluminum.—Kaiser Aluminum & Chemical Corp. sold its Kaiser Aluminium Europe (KAE) subsidiary to Hoogovens Group BV, retaining its 49% interest in the Anglesey Aluminium Smelter at Holyhead, Wales. The $354 million sale made Hoogovens one of the four largest rolled and extruded aluminum producers in Europe and increased the company's primary aluminum output by 77,000 tons per year. The acquisition included a smelter in Voerde; a sheet, plate, and extrusion plant in Koblenze; an extrusion plant in Vogt; and other plants in Belgium, the Federal Republic of Germany, and Switzerland. The Hoogovens smelter in Delfzijl, with a capacity of 170,000 tons per year, accounted for a significant portion of the total of 276,000 tons of primary aluminum produced in the Netherlands in 1987.

Iron and Steel.—Hoogovens Ijmuiden BV (HI) reported a loss of $84.7 million for 1987, compared with a profit of $75.9 million in 1986.[6] Sales revenues dropped to $2.9 billion (down 4%), and steel output was down 4.3%.[7] Other factors were closures for plant modernization and associated startup problems. Long-term investments were made totaling $542 million including the purchase of KAE and the 50% stake in the German steel producer Hille & Muller. Despite modernization investments by HI, the authorities planned to force the company to reduce sulfur dioxide emissions at the Ijmuiden works. To meet the environmental requirements, HI proposed to increase the output percentage of pellet feedstock. However, the company's pellet plant was operating at its capacity of 3.8 million tons per year. Furthermore, other European producers did not have the additional capacity to fulfill the increased demand for pellet consumption.[8]

Lead.—The Hollandse Metallurgische Industrie Billiton BV (HMI) plant in Arnhem, operating near capacity, produced 25,000 tons of lead in 1987, up slightly from its 1986 production. The country's production rose to 40,000 tons from 33,000 tons. HMI's increase was partly the result of improved efficiency of the plant's secondary refinery.

Magnesium.—About 91,000 tons of magnesia was produced by the deep solution method from mined salts in the northern portion of the Netherlands, by Noodelijke Zoutuinning NV and by Magnesia International NV, both owned by Billiton Refractories Inc.

Molybdenum.—Climax Molybdenum BV, a division of AMAX Inc., operated a 9,100-ton-per-year plant at Zozenburg. It produced molybdic oxides and other materials for the steel industry, by processing concentrates from mines in the United States.[9]

Zinc.—The Budelco BV zinc smelter

(owned 50% by Billiton's subsidiary Kempensche Zinkmaatschappij NV and 50% by Australian Mining and Smelting Ltd.) provided 104,000 of the 207,000 tons produced in the Netherlands in 1987. This modern and efficient electrolytic smelter was fed by zinc ore from 20 mines worldwide but chiefly from Canada. Budelco reported a financial crisis over environmental problems: It must dispose of large quantities of toxic waste including cadmium byproducts from smelting. The company also had high unpaid energy bills, and a weakened market had forced it to reduce the prices of its zinc.

INDUSTRIAL MINERALS

The abundant supply of local natural gas and the excellent harbor were the foundations upon which this Western European fertilizer industry was built. Initially, the port was used for importation of phosphate rock from North Africa; now Rotterdam shipped about 400,000 tons of fertilizer annually to the interior of the Continent and to other countries.

Several producers were modernizing plants for environmental or economic considerations. Nederlandse Stikstoft Maatschappij BV (NSM) replaced two ammonia-producing units built in the mid-1960's with a single unit with a record-high capacity of 1,750 tons per day and an operating efficiency of 22.54 million British thermal units per ton. The contractor, Santa Fe Braun Inc., completed it in 16.5 months compared with the normal time of 36 months. DSM Mestoffen BV was building a 1,400-ton-per-day replacement unit for its Gellen fertilizer complex. DSM Mestoffen also was ordered to close its phosphoric acid plant that was dumping cadmium-tainted waste into the Rhine.[10] The nation had other fertilizer pollution problems. The agricultural industry was consuming fertilizer at the rate of 0.62 ton per acre, an increase of 15% since the early 1980's and nearly twice the rate of fertilizer use in the Federal Republic of Germany.

MINERAL FUELS

The Government's historical dependence on hydrocarbon resources caused hardships in 1987. Declines in both price and volume of gas exports resulted in revenues of only $2.5 billion. The loss of income made Government deficit reduction much more difficult, but it also provided an opportunity to press for welfare reforms and for shifting the economy away from a dependence on gas income. But lower energy costs benefited both consumers and industrial users, because export prices could be reduced to maintain market share as the value of the guilder appreciated. Exploration and production companies, having cut staff and fixed expenses in 1986, ascertained they could profitably produce North Sea oil at the lower 1987 prices. Twenty-eight blocks were leased for exploration, and 35 exploration wells were proposed, 20% fewer than in 1986. Among the discoveries was a 178.6-billion-cubic-foot gasfield under Royal Dutch/Shell NV's Rotterdam refinery and the Nederlandse Aardolie Maatschappij BV's well in Block L/13, which tested at the rate of 28.6 million cubic feet per day. Also, Amoco Netherlands Petroleum Co.'s P/18-1 well tested 36 million cubic feet per day with 4,150 barrels per day of condensate as an offset to an earlier discovery in Block P/15.[11] Oil production from offshore fields was estimated at 90,000 barrels per day, down 8% from previous years. Reserves were estimated at 195 million barrels, and the seven refineries had a capability of 1.5 million barrels per day.

Planned for completion in 1988 were Shell's $350 million residue-hydro converter at Pernis and Atlantic Richfield Oil Co.'s octane-enhancer plant for gasoline at Botlek. Low natural gas prices caused the suspension of other projects, including one to pipe oil and gas from the northern part of the Netherlands continental shelf. The largest development project, the $1 billion F-3 project, was to access 429 billion cubic feet of gas and 37.7 million barrels of oil from several offshore fields. The Netherlands has ample gas supplies into the 21st century.

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[1]Physical scientist, Division of International Minerals.
[2]Where necessary, values have been converted from Netherlands guilder (f.) to U.S. dollars at the rate of f.2.03 = US$1.00, the average for 1987.
[3]Financial Times (London). The Netherlands. Nov. 23, 1987, Sec. 3, pp. 1-8.
[4]Work cited in footnote 3.
[5]Algemene Bank Nederland NV (Amsterdam). ABECOR Country Report. Dec. 1987.
[6]Metal Bulletin (London). Apr. 28, 1988, p. 23.
[7]Steel Times (London). Oct. 1987, p. 485.
[8]Metal Bulletin (London). Sept. 1987, p. 25.
[9]Mining Journal (London). May 22, 1987, p. 396; and Oct. 1987, p. 485.
[10]Phosphorus & Potassium (London). No. 148, Mar.-Apr. 1987, p. 12.
[11]Petroleum Economist (London). Feb. 1988, p. 62.

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